

Appendix B: Clean Copy of All Pending Claims

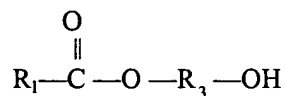
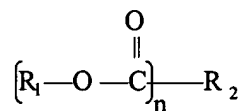
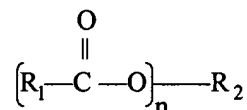
1. A gel composition, comprising:

an ester compound; and

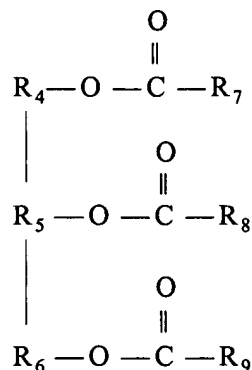
a polymer compound having at least one rigid block selected from the group consisting of polystyrene, polyethylene, polyvinylchloride, and phenolics and one elastic block selected from the group consisting of ethylene/butadiene copolymers, polyisoprene, polybutadiene, ethylene/propylene copolymers, ethylene-propylene/diene copolymers, wherein the polymer is selected from the group consisting of triblock copolymers, star polymers, radial polymers, multi-block copolymers, and combinations thereof,

wherein the gel composition is substantially free of mineral oils,

wherein the ester is represented by one of the following formulas:



or



wherein $n=1, 2, 3$, and 4 , and

R_1 includes hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, and substituted phenyl; R_2 includes hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, substituted phenyl, alkylene, phenylene, substituted alkylene, and substituted phenylene, and R_3 includes alkylene, phenylene, substituted alkylene, or substituted phenylene, and

wherein R_4 , R_5 , and R_6 individually include alkylene, phenylene, substituted alkylene, or substituted phenylene, and R_7 , R_8 and R_9 individually include hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, and substituted phenyl.

2. The gel composition of claim 1, further comprising a diblock copolymer.

6. The gel composition of claim 1, wherein the ester is selected from the group consisting of isopropyl myristate, isopropyl palmitate, C_{12} - C_{15} alkyl benzoate, octyl methoxycinnamate, octyl dodecyl neopentanoate, propylene glycol dicaprylate/caprate, jojoba oil, and isostearyl neopentanoate.

7. The gel composition of claim 1, wherein the polymer compound is present in the amount of about 1% to about 40 % by weight.

8. The gel composition of claim 2, wherein the diblock copolymer is selected from the group consisting of styrene-ethylene/propylene copolymers, styrene-ethylene/butadiene copolymers, styrene-isoprene copolymers, and styrene-butadiene copolymers.

9. The gel composition of claim 1, wherein the triblock copolymer is selected from the group consisting of styrene-ethylene/propylene-styrene copolymers, styrene-ethylene/butadiene-styrene copolymers, styrene-isoprene-styrene copolymers, and styrene-butadiene-styrene copolymers.

10. The gel composition of claim 2, wherein the diblock copolymer is hydrogenated.
11. The gel composition of claim 1, wherein the triblock copolymer is hydrogenated.
12. The gel composition of claim 1, wherein the triblock copolymer includes a grafted functional group.
13. The gel composition of claim 1, further comprising a suspended component.
14. The gel composition of claim 13, further comprising a diblock copolymer.
15. The gel composition of claim 13, wherein the suspended component is a solid selected from the group consisting of organic materials, inorganic materials, organometallic materials, phosphorescent materials, and fluorescent materials.
16. The gel composition of claim 13, wherein the suspended component is a solid selected from the group consisting of zinc oxide, coated zinc oxide, surface-treated zinc oxide, titanium dioxide, surface-treated titanium dioxide, graphite, explosives, air-sensitive chemicals, moisture-sensitive chemicals, boron nitride, iron oxides, talc, mica, plastics, polymers, silica, silicon dioxide, aluminum oxide, metal particles, antibacterials, antibiotics, anesthetics, glass, clays, gums, capsules containing an active ingredient, starch, modified starch, other encapsulated materials, and combinations thereof.
17. The gel composition of claim 13, wherein the suspended component is a liquid selected from the group consisting of water, water containing a water-soluble material, glycerin, propylene glycol, butylene glycol, alcohols, acids, surfactants, emulsifiers, polyglycerols, ethers, polar esters, fluorinated compounds, perfluoropolyethers, silicones, silicon-containing compounds, and combinations thereof.

18. The gel composition of claim 1, further comprising an active ingredient.

19. The gel composition of claim 18, wherein the active ingredient is selected from the group consisting of sunscreens, antiperspirants, deodorants, perfumes, cosmetics, emollients, insect repellants, pesticides, herbicides, fungicides, plasticizers, insecticides, and medicaments.

20. A gel composition, comprising:

a compound selected from the group consisting of alcohols, ethers, and combinations thereof;
and

a polymer compound selected from the group consisting of diblock copolymers, triblock copolymers, star polymers, radial polymers, multi-block copolymers, and combinations thereof,

wherein the polymer compound has at least one rigid block selected from the group consisting of polystyrene, polyethylene, polyvinylchloride, and phenolics and one elastic block selected from the group consisting of ethylene/butadiene copolymers, polyisoprene, polybutadiene, ethylene/propylene copolymers, ethylene-propylene/diene copolymers.

21. The gel composition of claim 20, wherein the alcohols include octyl dodecanol or isostearyl alcohol.

22. The gel composition of claim 20, wherein the ethers include dicarylyl ether.

23. The gel composition of claim 20, wherein the naturally occurring fats and oils include linseed oil, soybean oil, sunflower seed oil, corn oil, sesame oil, olive oil, castor oil, coconut oil, palm oil, and peanut oil.

24. A gel composition, comprising:

a compound selected from the group consisting of esters, alcohols, ethers, naturally occurring fats and oils, and combinations thereof; and

polybutadiene.

25. A method of making a gel composition, comprising:

mixing an ester compound with a polymer compound having at least one rigid block selected from the group consisting of polystyrene, polyethylene, polyvinylchloride, and phenolics and one elastic block selected from the group consisting of ethylene/butadiene copolymers, polyisoprene, polybutadiene, ethylene/propylene copolymers, ethylene-propylene/diene copolymers, wherein the polymer is selected from the group consisting of triblock copolymers, star polymers, radial polymers, multi-block copolymers, and combinations thereof,

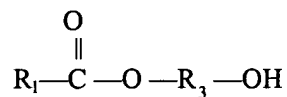
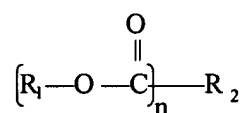
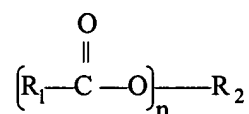
heating the mixture;

agitating the mixture until the mixture becomes homogeneous; and

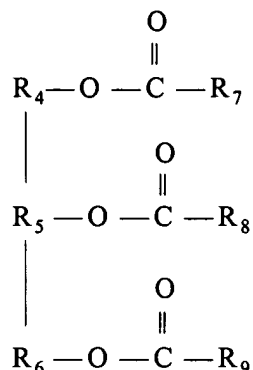
cooling the mixture,

wherein the gel composition is substantially free of mineral oils,

wherein the ester is represented by one of the following formulas:



or



wherein n=1, 2, 3, and 4, and

R₁ includes hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, and substituted phenyl; R₂ includes hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, substituted phenyl, alkylene, phenylene, substituted alkylene, and substituted phenylene, and R₃ includes alkylene, phenylene, substituted alkylene, or substituted phenylene, and

wherein R₄, R₅, and R₆ individually include alkylene, phenylene, substituted alkylene, or substituted phenylene, and R₇, R₈ and R₉ individually include hydrogen, hydrocarbyl, phenyl, methoxyphenyl, alkylphenyl, substituted alkyl, and substituted phenyl.

26. A method of making a gel composition, comprising:

mixing an alcohol, an ether, and combinations thereof with a polymer compound selected from the group consisting of diblock copolymers, triblock copolymers, star polymers, radial polymers, multi-block copolymers, and combinations thereof, wherein the polymer compound has at least one rigid block selected from the group consisting of polystyrene, polyethylene, polyvinylchloride, and phenolics and one elastic block selected from the group consisting of ethylene/butadiene copolymers, polyisoprene, polybutadiene, ethylene/propylene copolymers, ethylene-propylene/diene copolymers;

heating the mixture;

agitating the mixture until the mixture becomes homogeneous; and

cooling the mixture.

27. A method of making a gel composition, comprising:
mixing an ester, an alcohol, an ether or a naturally occurring fat or oil with
polybutadiene,
heating the mixture;
agitating the mixture until the mixture becomes homogeneous; and
cooling the mixture.